

CLAIM CHANGES:

1. (Original) A method for manufacturing a molded multilayer article by molding a multilayer sheet consisting of a plurality of laminated polymer layers, said method comprising the steps of:

extruding a plurality of monolayers of molten polymers by forcing the molten polymers into a multiple T die combined with a plurality of T dies so that the molten polymers are extruded respectively through the T dies;

forming an intermediate molten multilayer by superposing and laminating the monolayers extruded through the T dies outside the multiple T die while the polymers are in a molten state or a semimolten state; and

molding the intermediate molten multilayer by using a compression mold into a multilayer article of a desired shape.

2. (Original) A method for manufacturing a molded multilayer article by molding a multilayer sheet consisting of a plurality of polymer layers, said method comprising the steps of:

extruding a plurality of monolayers of molten polymers by forcing the molten polymers into a multiple T die combined with a plurality of T dies so that the molten polymers are extruded respectively through the T dies;

forming an intermediate molten multilayer by superposing and laminating the monolayers extruded through the T dies outside the multiple T die while the polymers are in a molten state or a semimolten state;

feeding the intermediate molten multilayer to a compression mold having the bottom half mold and a top half mold by advancing the multiple T die into a space between the bottom half mold and the top half mold;

cutting the intermediate molten multilayer to a predetermined length; and

molding the intermediate molten multilayer in the compression mold into a multilayer article of a desired shape.

3. (Original) The molded multilayer article manufacturing method according to claim 2, wherein the monolayers extruded through the T dies of the multiple T die include a first monolayer of a molten polymer serving as a skin layer, a second monolayer of a molten polymer serving as a base layer, and at least

one third monolayer of a molten polymer serving as a mid-layer sandwiched between the skin layer and the base layer.

4. (Original) The molded multilayer article manufacturing method according to claim 3, wherein the first, the second and the third monolayers are of the same molten thermoplastic polymer.
5. (Original) The molded multilayer article molding manufacturing method according to claim 3, wherein the temperature of the molten polymer forced into the T die for extruding the third monolayer is lower than those of the molten polymers forced into the T dies respectively for extruding the first and the second monolayer.
6. (Original) The molded multilayer article manufacturing method according to claim 5, wherein the third monolayer is formed of a molten unfoamed polymer containing a foaming agent.
7. (Original) The molded multilayer article manufacturing method according to claim 5, wherein the thermoplastic polymer is a polyolefin.
8. (Original) The molded multilayer article manufacturing method according to claim 3, wherein each of the monolayer is extruded through the corresponding T die with a predetermined pattern of varying width.
9. (Original) The molded multilayer article manufacturing method according to claim 8, wherein the monolayer have different patterns of varying width, respectively.
10. (Original) The molded multilayer article manufacturing method according to claim 2, wherein the monolayers are laminated near the die slot openings of the T dies so that the monolayer serving as the mid-layer is sandwiched between the monolayers respectively serving as the base layers.
11. (Original) The molded multilayer article manufacturing method according to claim 2, wherein the intermediate molten multilayer is delivered to the compression mold by cutting it into a predetermined length at a position between an open top half mold and a bottom half mold of the compression mold.
12. (Original) The molded multilayer article manufacturing method according to claim 2, wherein the intermediate molten multilayer is cut at a position below

the die slot openings of the T dies of the multiple T die with respect to a direction in which the monolayers are extruded.

13. (Original) The molded multilayer article manufacturing method according to claim 2, wherein the intermediate molten multilayer is cut in a plane including an exit of a slot opening of the respective T dies.

14. (Cancelled)

15. (Original) The molded multilayer article manufacturing method according to claim 12, wherein a cutting process for cutting the intermediate molten multilayer comprises the steps of preparing and heating a cutting means; disposing a pair of pad members at a position below the die slot openings of the T dies of the multiple T die;

holding a portion of the intermediate molten multilayer including an upstream end portion to be cut between the pair of pad members; and

shearing the intermediate molten multilayer with the cutting means while the multilayer is held between the pair of pad members.

16. (Currently Amended) The molded multilayer article manufacturing method according to claim ~~14~~ or 15, wherein air is blown from within the bodies of pad members against the intermediate molten multilayer to facilitate the separation from the pad members on completion of cutting the intermediate multilayer. .

17. (Original) The molded multilayer article manufacturing method according to claim 13, wherein a cutting process comprises the steps of

extending a metal wire in a plane intersecting a plane including the intermediate molten multilayer so as to be able to be brought into contact with end surfaces of the T dies of the multiple T die in which the die openings of the T dies open; and

moving the metal wire along the end surfaces of the T dies along the width of the intermediate molten multilayer.

18. (Original) The molded multilayer article manufacturing method according to claim 17, wherein a moving operation for moving the metal wire accompanies by heating the metal wire, and taking up a length of the metal wire.

19. (Original) The molded multilayer article manufacturing method according to claim 13, wherein a cutting operation for cutting the intermediate molten multilayer comprises the steps of:
disposing a plurality of cutting members in a plane intersecting the intermediate molten multilayer so as to be able to be brought into contact with the exit of the slot opening of the T dies of the multiple T die; and
reciprocating the cutting members along the exit of the slot opening of the T dies in directions parallel to the width of the multilayer sheet.
20. (Original) The molded multilayer article manufacturing method according to claim 19, wherein a reciprocating operation for reciprocating the cutting members comprises: holding the cutting members in sliding contact with the exit of the slot opening of the T dies and moving the cutting members for a cutting stroke along the width of the intermediate multilayer to cut it off; and moving the cutting members for a return stroke to their initial positions while separating the cutting members from the exit of the slot opening of the T dies.
21. (Original) The molded multilayer article manufacturing method according to claim 2, wherein the intermediate molten multilayer comprises a first monolayer sheet of a molten plastics serving as a skin layer, a second monolayer sheet of a molten plastics serving as a base layer, and at least one third monolayer sheet of an unfoamed molten plastics containing a foaming agent, serving as a mid-layer sandwiched between the skin layer and the base layer; and said compression molding process comprises the steps of compressing the intermediate molten multilayer in the compression mold, heating the compression mold to make the mid-layer produce foams, cooling the compression mold, and opening the compression mold and taking out a molded multilayer article from the compression mold.
22. (Original) The molded multilayer article manufacturing method according to claim 21, wherein the compression molding process further comprises the steps of replacing the compression mold with another compression mold in which the intermediate multilayer is putted before heating the former, compressing the latter mold to shape the intermediate multilayer into a molded multilayer article.

23. (Original) A method for manufacturing a molded multilayer article by molding a multilayer sheet consisting a plurality of polymer layers, said method comprising the steps of extruding a plurality of monolayers of molten polymers by forcing the molten polymers into a multiple T die combined with a plurality of T dies so that the molten polymers are extruded respectively through the T dies; passing the monolayers extruded through the T dies through a space between a pair of nip rollers disposed opposite to each other; forming an intermediate molten multilayer by superposing and laminating the monolayers outside the multiple T die by pressing the monolayers between the pair of rotating nip rollers while the polymers are in a molten state or a semi-molten state; advancing the pair of nip rollers together with the multiple T die into a space between an open top half mold and a bottom half mold of a compression mold while a laminating operation of the pair of nip rollers is continued; fixing a front end portion of the intermediate multilayer to one end of the bottom half mold of the compression mold; moving the pair of nip rollers together with the multiple T die backward while a laminating operation of the pair of nip rollers is continued; stopping the rotation of the pair of nip rollers and stopping the extrusion of the molten polymers while the pair of nip rollers are moved continuously backward in order to cut the intermediate molten multilayer; and molding the intermediate molten multilayer molding in the compression mold into a multilayer article of a desired shape.
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